

CASE REPORT

Cervical Cystic Lymphangioma in Child: A Case Report.

Nurzawani S, Mohd Aznan MA.

Department Family Medicine, Kulliyah of Medicine, International Islamic University Malaysia, Indera Mahkota Campus, Pahang, Malaysia.

Corresponding Author

Nurzawani Binti Shamsudin

Department of Family Medicine, International Islamic University Malaysia, Pahang Malaysia.

Email: nurzawanishamsudingmail.com

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Abstract

Lymphangiomas are benign swellings of the neck which can occur among the paediatric population. They are fluid-filled sacs that result from obstruction in the lymphatic system. Most of the cases are diagnosed at birth and 95% of them are found in the neck, head, or axilla. Lymphangiomas typically present surgical obstacles and difficulties due to their propensity to invade and disseminate across nearby structures. We report the case of a 3-year-old child who presented with progressive lateral cystic cervical neck swelling for 4 months. Surgical excision of the lesion was performed. The final histopathological diagnosis was lymphangioma. A 6 month follow up shows no recurrence and a cosmetically acceptable scar.

Keywords: *Cervical lymphangioma; congenital lymphatic malformation; cystic lymphangioma.*

Introduction

Differential diagnosis for lateral neck swelling is challenging as it can be attributed to structures from lymphatic system, vessels, nervous system, muscles and surrounding structures. The majority of these tumours are identified by the time the patient reaches 3 to 5 years of age [1]. Lymphangiomas are rare and represent 5% of benign congenital lymphatic malformations diagnosed in children [2,3]. As most occur at cervico-fascial region, they may result in respiratory discomfort, dysphagia, or airway obstruction, which may call for urgent surgical intervention. [1,4]. The swelling of lymphangiomas appears as large, deep and diffuse swelling [1], and is typically transluminant and doughy on palpation [1,3,4]. It develops congenitally due to the developmental defects or as a result of primary multilocular cystic malformations of dilated lymphatics that join the central lymphatic system. [1,2,5]. Lymphangiomas are typically multiloculated and contains straw-coloured fluid, which could become discoloured if there is a subsequent infection. [1]. Surgical excision of the tumours is the treatment of choice for lymphangiomas. In this report, we are present a case of cervical lymphangiomas treated surgically with no recurrence observed after a 6-month follow-up period.

Case report

A healthy 3-year-old boy with normal development presented to the family health clinic with left lateral cystic neck swelling persisting for the past 4 months. The swelling, initially the size of a marble, has progressively increased to a tennis ball-like size, occasionally causing discomfort. The boy experienced restricted movement in his neck during right lateral range of motion, but there were no dysphonia, dysphagia, or dyspnea, and it was not preceding by upper respiratory tract infection. Upon examination, the left lateral neck swelling measures 8 x 6 cm, displaying characteristics such as soft in consistency, well-defined margin, mobile,

fluctuant, non-tender, and non-pulsatile. Transillumination test was positive. Patient was then referred to the Otorhinolaryngology clinic for further management.

MRI of the neck was performed, and the report revealed a well-defined cystic mass with presence of a few internal septations occupying the left posterior cervical space, measuring approximately 4.7 x 3.8 x 6.3 cm [AP x W x CC] in size. The mass, extending into the left posterior cervical space with mass effect, was consistent with a lymphatic malformation.

Surgical excision of the cyst was performed under general anaesthesia. Intraoperatively, an 8 x 6 cm soft, jiggly mass was seen, and milky content was obtained upon aspiration. The cyst was intact and submitted for histopathology examination. The result showed an intact cyst which contained tan-whitish coloured fluid, identified as chyle. Microscopically, the cyst wall exhibited fibrofatty tissue with many irregular vascular spaces filled with some mature lymphocytes. Additionally, adjacent dilated and congested capillaries and veins were observed, consistent with lymphangioma. No cellular atypia or malignancy was seen. During the postoperative follow-ups at 1, 3, and 6 months, the patient remained asymptomatic, with no signs of recurrence.

Discussion

Cervical lymphangioma is a benign abnormality of the lymphatic system. Almost 80-90% of cases present by the age of 3 years [1,5]. We reported a case of a three-year-old child. In paediatric patients, lymphatic malformations are typically found in the cervico-facial region as well as in the axilla, and they may even manifest in extra cervical sites [9-10]. It can further be classified into uniloculated or multiloculated lesions [5].

It can be further classified based on three histological subtypes: capillary haemangiomas,

which consist of small lymphatics; cavernous lymphangiomas, which consist of big lymphatics; and cystic lymphangiomas, which consist of huge lymphatics with collagen and smooth muscles. [3-4,7-9]. In our case, it was a cystic lymphangioma containing milky straw-coloured fluid. Lymphangiomas can be misdiagnosed as other types of cystic neck swellings such as branchial cleft cysts, dermoid cysts, hemangiomas, and other childhood tumours [4,10]. It is usually a transluminant lesion similar to our case [5,8].

Lymphangioma is benign lesion; however, complications may occur such as haemorrhage inside the cyst, infection and - obstruction leading to symptoms such as respiratory distress, dysphagia as well as nerve compression causing pain and paraesthesia [4-6,8]. In our case, although the patient did not have airway obstruction, the patient experienced on-and-off pain, possibly due to mass effect.

One of the diagnostic tools that can be used to diagnose neck cystic tumours is ultrasonography of the neck, which can reveal the existence of a cystic lesion with many septa and no internal vascular flow [2,6]. In addition, CT and MRI provide more accurate details regarding the extend of mass in relation to neighbouring structures. [1,5,7]. In this case, an MRI of the neck was performed, showing left posterior cervical mass with a mass effect suggestive of lymphatic malformations.

There are several treatment modalities for the successful treatment of lymphangiomas. These encompass the injection of sclerosant agents, repeated aspiration, bleomycin injection, radiotherapy and surgical exploration [1-3,5]. In this patient, surgical excision of left cervical

lymphangioma was performed under general anaesthesia. This method has also been evaluated by others, leading to the conclusion that surgical excision of the lesion should be considered in all cases. Furthermore, they reported spontaneous regression of the lesion following surgery [8-9].

Overall, primary care providers serve as the first point of contact for patients with cervical lymphangioma, playing a vital role in recognizing symptoms, conducting initial evaluations, and coordinating appropriate diagnostic tests and referrals to specialists for further management and treatment, ultimately aiming to enhance outcomes for affected children. Managing lymphangiomas in paediatric patients requires a multidisciplinary approach, and careful consideration of factors such as the patient's age, lesion size, and location.

Conclusion

In conclusion, addressing neck swelling in paediatric patients requires a comprehensive assessment, including imaging studies, to accurately identify the underlying cause and individualized treatment plans for each patient. Thus, if a child presents with neck swelling for more than 2 weeks, physicians should investigate whether it is due to infection, congenital or malignancy. Any cases of congenital or suspected of malignancy should promptly be referred for further management and early interventions.

Consent from the parents for the use of images and content in publication:

Prior to utilizing pictures of the neck swelling and MRI images of the neck, verbal consent was obtained from the parents of the patient.



Figure 1. Right lateral view and anterior neck view showing swelling at posterior cervical region

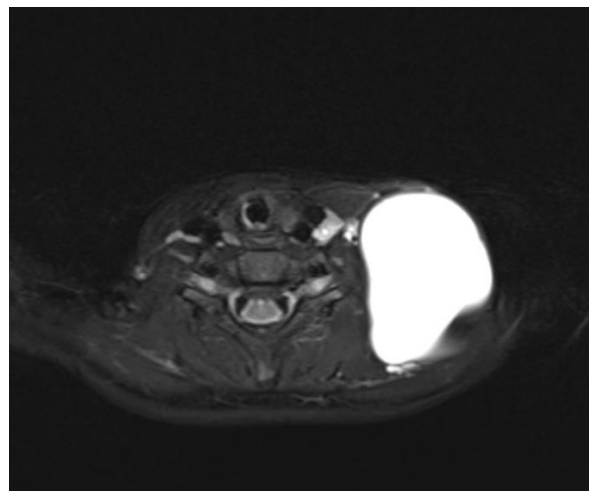
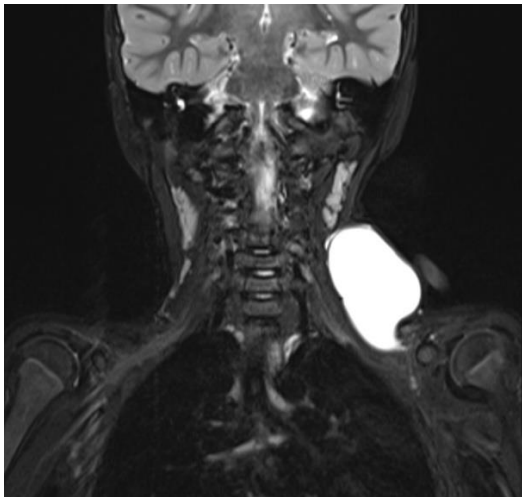


Figure 2. MRI of neck show left posterior cervical cystic mass with its extension and mass effect.

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